UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
- earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☒ This action is **FINAL.**　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All　b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This Action is in response to Amendment filed 3/18/04 and Supplemental Declaration

filed 4/13/04, which have been fully considered.

2.   Amended claims 1-16 are presented for examination.

3.   This Action is FINAL.

Specification

4.   The disclosure is objected to because of the following informalities: headings should be

provided for each section of the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   **Claims 1-10** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to enable one skilled in the art to which it pertains, or

with which it is most nearly connected, to make and/or use the invention. Specifically, claim

1 recites "a plurality of grammar files all written in a same, hierarchical and object oriented

language in text format." As described on page 14 of the specification, the grammar files are

disclosed as being in either the ".dtd" or ".xsd" formats. The Examiner finds that .dtd and

.xsd files are not hierarchical and object oriented languages *per se*. The specification does

not disclose that the grammar files may be in any other format (for example, XML).

Therefore, the claim(s) contains subject matter which was not described in the specification

in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at

the time the application was filed, had possession of the claimed invention.

7.   As for claim 3, even if Applicant demonstrates that .dtd and .xsd files *are* hierarchical

and object oriented languages, Applicant does not disclose that the grammar files may be in

the XML format. Therefore, the claim(s) contains subject matter which was not described in

the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention.

8.   As dependent claims, claims 2-10 suffer from the same deficiencies as claim 1.

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10.   **Claims 1-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Specifically it is not clear how to interpret the limitation "a

plurality of grammar files all written in a same, hierarchical and object oriented language in

text format" since the grammar files have not been disclosed as being written is said same,

hierarchical and object oriented language in text format (see 112, first paragraph, rejection

above). For the purpose of applying prior art, very little patentable weight will be given to

this limitation in the claims.

11.   As for claim 3, it is unclear how to interpret the limitation that the grammar files are in

XML, since they are disclosed as being in either the .dtd or .xsd formats (see 112, first

paragraph, rejection above). For the purpose of applying prior art, very little patentable weight will be given to this limitation in the claims.

12.   **Claims 14-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, claim 14 recites, "said description grammar for translation of at least one of the application description files from at least one graphic automation language into the XML language." However, according to the limitations of claims 11 and 12, the application description files are already in the XML language. It clearly does not make sense to translate the files from XML into XML. It appears that Applicant intends to claim translation from the XML language into at least one graphic automation language. For the purpose of applying prior art, the Examiner interprets that any teaching of using a grammar file to translate another file either from or to XML is sufficient to meet the limitations of the claim.

13.   As dependent claims, claims 15 and 16 suffer from the same deficiencies as claim 14.

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15.   **Claims 1-4 and 11-14** are rejected under 35 U.S.C. 102(e) as being anticipated by

Lawrence et al (US 6,393,341 B1) (hereinafter Lawrence).

16.   As for claim 1, Lawrence discloses a programming station for generating an automation

program to be executed in automation equipment and written in at least one graphic

automation language, said programming station comprising an internal memory for storing a

plurality of grammar files (description files 26, Fig. 3; col. 4, lines 32-34, "Thus, when a new

meter...the repository 26.") all written in a same, hierarchical and object oriented language in

text format, each said grammar file comprising a description grammar describing a respective

graphic automation language for generating an automation program (col. 3, line 44 - col. 4,

line 9, "A typical communications...modification of meter types.").

17.   As for claim 2, Lawrence discloses the programming station according to claim 1,

wherein said internal memory also is for storing at least one application description file, each

said description file describing part of an automation application and being written in the

single, hierarchical and object oriented language (col. 3, line 11 - col. 4, line 4, "Referring to

Fig. 2...of meter types."; col. 4, lines 32-34, "Thus, when a new meter...the repository 26.").

18.   As for claim 3, Lawrence discloses the programming station according to claim 2,

wherein the single, hierarchical and object oriented language is the XML (extended Markup

Language) language (col. 4, lines 32-34, "Thus, when a new meter...the repository 26.").

19.   As for claim 4, Lawrence discloses the programming station according to claim 2,

wherein said at least one application description file comprises an application program

description file, an application input-output description file, and an application data

description file (considered inherent to SCAD systems; col. 3, lines 11-20, "Referring to Fig. 2...and debugging tools.").

20.   As for claim 11, Lawrence discloses an automation equipment for generating an automation program, comprising memory means for storing a set of a plurality of automation application description files expressed in a same, hierarchical and object oriented language, the automation equipment also comprising translation means for converting each application description file into a binary language that can be executed by the automation equipment (col. 3, line 44 - col. 4, line 9, "A typical communications...modification of meter types."; The conversion to binary format is considered inherent for execution by the devices. As understood by one of ordinary skill in the art, all machines execute commands in binary format -- commonly known as "machine language" -- at the lowest level. See also Applicant's admitted prior art on pg. 16, lines 11-20, "This automation...in figure 1.").

21.   As for claim 12, Lawrence discloses the automation equipment according to claim 11, wherein the single, hierarchical and object oriented language is the XML (extended Markup Language) language (col. 4, lines 5-10, "The repository 26...of meter types.").

22.   As for claim 13, Lawrence discloses the automation equipment according to claim 12 wherein the set of application description files contains an application program description file, an application input-output description file, and an application data description file (considered inherent to SCADA systems; col. 3, lines 11-20, "Referring to Fig. 2...and debugging tools.").

23.   As for claim 14, Lawrence discloses the automation equipment according to claim 12, further comprising a grammar file storing a description grammar, said description grammar

for translation of at least one of the application description files from at least one graphic

automation language in the XML language (col. 3, line 44 - col. 4, line 9, "A typical

communications...modification of meter types.").

24.   **Claims 11** is rejected under 35 U.S.C. 102(b) as being anticipated by Nixon et al (US

5,801,942) (hereinafter Nixon).

25.   As for claim 11, Nixon discloses an automation equipment for generating an automation

program, comprising memory means for storing a set of a plurality of automation application

description files expressed in a same, hierarchical and object oriented language, the

automation equipment also comprising translation means for converting each application

description file into a binary language that can be executed by the automation equipment

(col. 9, lines 33-45, "The process control...in that language."; col. 12, line 50 - col. 13, line

22, "The configuration model...and the like."; The conversion to binary format is considered

inherent for execution by the devices. As understood by one of ordinary skill in the art, all

machines execute commands in binary format -- commonly known as "machine language" --

at the lowest level. See also Applicant's admitted prior art on pg. 16, lines 11-20, "This

automation...in figure 1.").

Claim Rejections - 35 USC § 103

26.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

27.   **Claims 2-10 and 16** are rejected under 35 U.S.C. 103(a) as being obvious over Lawrence in view of Nixon et al. (US 5,801,942) (hereinafter Nixon). Although the Examiner finds that Lawrence teaches all the limitations of claim 2 (see 102 rejection above), even if Applicant asserts that Lawrence fails to disclose storing at least one application description file "describing part of an automation application and being written in the single, hierarchical and object oriented language," it is well-known and expected in the art to use hierarchical object oriented languages and files for the creation of applications, because it allows for easy modification and simplified program design, as taught by Nixon (col. 9, lines 33-45, "The process control...in that language."). Moreover, since the claim merely recites "at least one," the prior art is only required to teach or suggest one application description file. It would have been obvious to one of ordinary skill in the art to modify Lawrence by storing at least one application description file describing part of an automation application and being written in the single, hierarchical and object oriented language, because it provides for easy modification and simplified program design, as taught by Nixon above.

28.   As for claim 3, Lawrence discloses the programming station according to claim 2, wherein the single, hierarchical and object oriented language is the XML (extended Markup Language) language (col. 4, lines 32-34, "Thus, when a new meter...the repository 26.").

29.   As for claim 4, Lawrence discloses the programming station according to claim 2, wherein said at least one application description file comprises an application program description file, an application input-output description file, and an application data description file (considered inherent to SCADA systems; col. 3, lines 11-20, "Referring to Fig. 2...and debugging tools.").

30.   As for claims 5-10 and 16, although Lawrence discloses translating means (including description or "grammar" files) for interfacing with a variety of applications, Lawrence does not teach the specific claimed formats (e.g. ladder, SFC) of the applications nor the specific claimed elements of the applications (e.g. links, jumps, coils, etc.). Nixon discloses the specific limitations of claims 5-10 and 16, as laid out in the previous rejection, paper no. 4. It would have been obvious to one of ordinary skill in the art to modify Lawrence to incorporate the teachings of Nixon because this would allow for interfacing various devices with a variety of traditional application programs, as selected by the user, and would further allow for easy modification and simplified program design, as taught by Nixon (col. 3, lines 39-65, "Several control languages...a control strategy."; col. 9, lines 33-45, "The process control...in that language.").

31.   **Claim 15** is rejected under 35 U.S.C. 102(b) as being obvious over Lawrence (US 6,393,341 B1) in view of Lau (US 6,598,219 B1). As for claim 15, Lawrence does not specifically disclose means of checking that the description of the application in the XML language satisfies the description grammar of the graphic automation language used. Lau teaches a means for translating data using XML which includes means of checking the arrangement of the data in order to validate the arrangement of the data and prevent errors (col. 2, line 66 - col. 3, line 20, "According to an...according to XML."). It would have been obvious to one of ordinary skill in the art to modify the teachings Lawrence by checking that the description of the application in the XML language satisfies the description grammar of the graphic automation language used, in order to validate the arrangement of the data and prevent errors, as taught by Lau.

Response to Arguments

Oath/Declaration

32.   Objections to the Oath/Declaration are hereby withdrawn in view of the Substitute Declaration filed 4/13/04.

Specification

33.   Objections to the specification are hereby maintained. Specifically, Applicant has not provided section headings.

112 Rejections

34.   Applicant did not specifically address concerns raised in the 112 Rejections section of the previous rejection, paper no. 4, but merely states that the claims were amended to clarify the intended meaning. Previous rejections under 35 USC 112, second paragraph, are hereby withdrawn in view of Applicant's Amendment. However, with respect to the previous rejection of claims 1-10, 14 and 15 based on the indefiniteness of the terms "grammar file" and "grammar" (not addressed by Applicant), the Examiner finds that the terms are not indefinite but merely broad. For the purpose of applying prior art, the Examiner interprets that the term "grammar file" is merely a file having rules or structure as defined by the "grammar." Under this interpretation, almost any file would comprise a "grammar file." Any file which could be compiled or run would inherently comprise a "grammar file" (i.e. the grammar is required to parse the file).

102 Rejections

35.   Applicant's arguments filed 3/18/04 with respect to Nixon et al. (US 5,801,942) are not persuasive.

36.   With respect to claims 1 and 11, the Examiner respectfully disagrees with Applicant's

assertion that Nixon fails to teach grammar (or description) files written in a same

hierarchical and object oriented language in text format. Specifically, the Examiner finds

that C++ is exactly such a language and is clearly taught by Nixon (see col. 9, lines 33-45,

"The process control...in that language."). Furthermore, the description grammar describing

a respective automation language is considered inherent to the process configuration

program, which is disclosed as written in C++ (col. 3, line 58 - col. 4, line 20, "In accordance

with...screen presentations."; col. 12, line 50 - col. 13, line 39, "The configuration

model...function block 522.").

37.   Therefore, claim 11 is properly rejected under 35 USC 102(b) as anticipated by Nixon.

38.   Applicant's arguments filed 3/18/04 with respect to Lawrence et al. (US 6,393,341 B1)

have been fully considered but they are not persuasive.

39.   With respect to independent claims 1 and 11, Applicant asserts that Lawrence fails to

teach *files* describing a respective graphic automation language for generating an automation

program. First, the Examiner notes that only claim 1 recites this limitation. Claim 11 merely

recites a set of "automation application description files" and translation means for

converting them into a binary language. With respect to the Lawrence reference, Applicant

makes no arguments specific to the limitations of claim 11.

Referring to claim 1, the Examiner respectfully disagrees with Applicant's interpretation.

The Examiner finds that Lawrence clearly teaches a plurality of grammar files written in a

same, hierarchical and object oriented language in text format. Specifically, lines 32-34 of

column 4 recite:

Thus, when a new meter type is added to the system, *a file* containing a description for the new meter type is added to the repository 26. (emphasis added)

Lines 5-9 of column 4 further disclose that the files may be in XML, which is a hierarchical, and object oriented language in text format. Lawrence further discloses that the description files are used to translate requests from the applications into proper form for a particular meter. As would be understood by one of ordinary skill in the art, once translated, these requests comprise "automation programs" (i.e. they cause the meter devices to execute specific tasks). Furthermore, Lawrence teaches that the requests themselves may comprise files written in XML (col. 4, lines 39-42, "The request is generated...such as XML.").

For all the reasons above, the Examiner finds that claims 1-4 and 11-15 are properly rejected under 35 USC 102(e) as anticipated by Lawrence.

103 Rejections

40. Applicant's arguments filed 3/18/04 have been fully considered but they are not persuasive.

41. Applicant asserts that because the base references fail to teach the limitations of independent claims 1 and 11, the dependent claims are allowable for the same reasons. It has been shown above that Lawrence properly anticipates all the limitations of claims 1 and 11. Therefore, claims 2-10 and 16 are properly rejected under 35 USC 103(a) as obvious over Lawrence in view of Nixon. Similarly, claim 15 is properly rejected under 35 USC 103(a) as obvious over Lawrence in view of Lau.

Conclusion

42. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

 A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Perez-Daple whose telephone number is 703-305-4897. The examiner can normally be reached on 9am - 6pm.

 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information

about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/5/04

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